

REMARKS

Status of the Claims

Claims 1-50 are presently pending, and these presently pending claims include both nonelected and elected claims. In this regard, claims 43-50 are nonelected and have been withdrawn from consideration, and claims 1-42 are elected.

Previously dependent claim 39 has been amended to recite the subject matter of all the claims from which this claim ultimately depended, and claim 39 has been made independent. Accordingly, claims 1, 39, 41, and claim 43 are independent - independent claims 1, 39, and 41 being elected, and independent claim 43 being nonelected.

Amendments to the Specification

In the last sentence of the paragraph at lines 19-28 of page 10, "fluoro-thermoplastic polymer" has been changed to --fluoroelastomer--- to correct what is obviously an inadvertent error. It is clear, from the paragraph, that the intent in this sentence was to provide further discussion of the fluoroelastomer referred to in the immediately preceding sentence.

Discussion of flexible hollow filler particles 28, which are shown in Fig. 2, has been added to the paragraph at lines 6-11 of page 21, in response to the Examiner's objection to Fig. 2 because reference character 28 was not mentioned in the description. These particles were already disclosed in the

original application as filed - for example, in the sentence at page 9, lines 23-26 of the specification, in the sentence at page 10, lines 4-9 of the specification, and elsewhere in the application.

Amendments to the Claims

In claims 24 and 25 "fusing-station" has been changed to ---fuser---, for consistency of language. Claim 23, from which claims 24 and 25 both ultimately depend, further defines the fusing-station roller as a fuser roller, so claims 24 and 25 have been amended to refer specifically to the latter.

Claim 30 has been amended to correct an inadvertent error. This claim recites a pressure roller, and accordingly should have depended from claim 29 - which further defines the fusing-station roller as a pressure roller - rather than from claim 27, wherein the fusing station roller is not further defined as either a fuser roller or a pressure roller. Moreover, the resilient layer thermal conductivity range recited in claim 30 is approximately between 0.1 BTU/hr/ft/°F - 0.2 BTU/hr/ft/°F. In this regard, page 24, lines 1-9, discussing the Fig. 3 pressure roller, refer to resilient layer 34 thereof as having a thermal conductivity in this very range; so the teaching of the specification confirms that this is a pressure roller range.

The deletion of "elastically deformable" from claim 38 is for consistency of language. As recited in this claim, the

roller nevertheless is elastically deformable, in accordance with claim 1, from which claim 38 ultimately depends.

In the present Office Action, the only rejection of claim 39 is an obviousness double patenting rejection, which is addressed by the filing of a Terminal Disclaimer concurrently with this Reply. It accordingly appears that, regardless of any other reasons for allowability, claim 39 - having been made independent, with added recitation specifying the subject matter of all the claims from which it ultimately depends - meets the requirements of the Office Action, and is patentable for this reason alone.

The amendment of claim 39 also corrects its dependency recitation at the claim beginning, which was an erroneous reference to the "fluoropolymer of Claim 38". Claim 38 is directed to a fusing-station roller, so ---fusing-station roller--- should have been used instead of "fluoropolymer".

In claim 40, the change of "fluoropolymer" to ---fusing-station roller--- has been made to correct the same inadvertent error.

Election/Restrictions

In accordance with the requirement of the Examiner, the election of Group I, claims 1-42, is affirmed.

Objections to Drawings

A drawing Replacement Sheet for Figs. 1 and 2, with layer 12 and the numeral 12 deleted from Fig. 1, is being filed

concurrently with this Reply. As noted herein, the specification had been amended to include discussion of flexible hollow filler particles 28; support in the original disclosure for this amendment also has been noted herein. It appears therefore that both of the Examiner's objections to the drawings have been addressed.

Specification

In accordance with the Examiner's request, the specification had been reviewed, and all errors discovered are corrected in this Reply.

Rejection of claims 35 and 36 under 35 U.S.C. § 112, Second Paragraph, for Indefiniteness

It does not appear that there is any requirement for reciting polymer molecular weight in terms of number average, weight average, etc. In fact, it is well known and accepted in the polymer arts to disclose and recite size using molecular weight per se, without further embellishment, as the unit of measurement. For instance, U.S. Patent No. 4,820,693 (GILLESPIE) recites (in claim 34) and discloses (at column 5, lines 64-67) the polymer pentosan polysulfate as having a molecular weight of 1,600-6,000, without further definition of the molecular weight for this range.

A copy of GILLESPIE is filed with the present Reply. More patent examples demonstrating this point can be discovered and cited to the Examiner, if necessary.

In view of the foregoing, it is respectfully submitted that the recitation in claims 35 and 36 of molecular weight, without further definition, meets the requirements of 35 U.S.C. § 112, second paragraph.

Rejection of claims 1-38 and 40-42 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,261,214 (MEGURIYA) in view of U.S. Patent No. 6,225,409 (DAVIS et al.)

In fact, MEGURIYA and DAVIS et al. teach different end results, obtained with different starting materials, using different means.

The MEGURIYA roller layer, though it optionally can have an overlying fluoro-resin layer (column 1, line 65 through column 2, line 1), is a layer of organopolysiloxane alone (column 1, lines 57-62). Different fillers distributed through this layer, but there is no polymer other than organopolysiloxane making up the continuous phase.

In contrast, the DAVIS et al. layer is an interpenetrating polymeric network (IPN) of separately crosslinked fluorocarbon copolymer and polyfunctional siloxane (column 4, lines 10-17). DAVIS et al. itself notes that these two types of polymers will not readily mix, and that they tend toward phase separation because of their incompatibility; DAVIS et al. further teaches particular starting materials and processing conditions, including the use of particular solvents, for overcoming these disadvantageous properties (column 4, line 22 through column 5, line 5).

The Examiner maintains that one skilled in the art would have been motivated to interpenetrate the MEGURIYA silicone with the DAVIS et al. fluoroelastomer. However, it is respectfully submitted that MEGURIYA and DAVIS et al., whether each is considered alone or they are taken together, fail to disclose or suggest how to combine their teachings to provide Applicants' recited invention. For instance, as just one difficulty, there is no disclosure or suggestion how MEGURIYA could be modified so that the requisite solution is provided and employed.

Moreover, even if this impossible combination could be made, the result still would not be Applicants' recited invention. Applicant's layer, as recited, is a fluoropolymer material. The MEGURIYA layer is a silicone rubber layer (Abstract; column 5, lines 15-23); modifying it to include a fluorelastomer would not make it a fluoropolymer layer.

For the foregoing reasons, claims 1-38 and 40-42 are patentable over the combined teachings of MEGURIYA and DAVIS et al.

And particularly as to Applicants' claims 29 and 30, it is noted that these claims recite the pressure roller of Applicants' invention. MEGURIYA (Abstract; column 1, lines 4-8 and column 1, line 65 through column 2, line 1; column 2, lines 7-12) and DAVIS et al. (column 3, lines 42-48) teach fusing rollers and heat fixing rolls. MEGURIYA and DAVIS et al. do not, alone or in combination, disclose or suggest a pressure roller. For this additional reason, claims 29 and 30 are

patentable over the combined teachings of these two patents.

Rejection of claims 1-42 over claim 31 of U.S. Patent No. 6,486,441 (CHEN et al.) in view of MEGURIYA in view of DAVIS et al., for obviousness-type double patenting

A Terminal Disclaimer pertaining to CHEN et al. has been filed concurrently with this Reply. It is therefore respectfully submitted that the rejection for obviousness-type double patenting has been addressed.

Allowability of claim 39 as amended

As has been noted, the only rejection of claim 39 in the present Office Action is an obviousness double patenting rejection. This rejection having been addressed by the indicated concurrent filing of a Terminal Disclaimer - and claim 39 having been made independent, with added recitation specifying the subject matter of all the claims from which it ultimately depends - it accordingly appears that claim 39 is allowable in view of these circumstances, regardless of any other reasons supporting allowance.

CONCLUSION

It is respectfully submitted that, for the reasons as stated, the claims presently pending in this Application are patentable over the art of record, and the Application is otherwise in condition for allowance.

Withdrawal of the restriction requirement, withdrawal of the objections and rejections, and allowance of all pending claims, is respectfully requested. It is further respectfully requested that this allowance be set forth in the next Official Action for the Application.

Favorable action is respectfully solicited.

Should the Examiner have any questions or comments regarding this matter, the undersigned may be contacted at the below-listed telephone number.

Respectfully submitted,



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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.